

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
1 April 2004 (01.04.2004)

PCT

(10) International Publication Number  
**WO 2004/026845 A1**

(51) International Patent Classification<sup>7</sup>: **C07D 253/06,**  
C07C 281/16

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:  
PCT/HU2003/000072

(22) International Filing Date:  
18 September 2003 (18.09.2003)

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
P 0203114 20 September 2002 (20.09.2002) HU

#### Declaration under Rule 4.17:

(71) Applicant (*for all designated States except US*):  
**RICHTER GEDEON VEGYÉSZETI GYÁR RT.**  
[HU/HU]; Gyömrői ut 19-21, H-1103 Budapest (HU).

— as to applicant's entitlement to apply for and be granted  
a patent (Rule 4.17(ii)) for the following designations AE,  
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES,  
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH,  
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO  
patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG,  
ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU,  
TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE,  
DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT,  
RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): NEU, József  
[HU/HU]; Muskáti u. 4, H-8200 Veszprém (HU).  
GIZUR, Tibor [HU/HU]; Avarszállás u. 38, H-1162 Bu-  
dapest (HU). TÖRLEY, József [HU/HU]; Katona József  
u. 41, H-1137 Budapest (HU). CSABAI, János [HU/HU];  
Harmat u. 136, H-1104 Budapest (HU). VÉGH, Ferenc  
[HU/HU]; Ferenczi B. u. 3, H-2500 Esztergom (HU).  
KÁLVIN, Péter [HU/HU]; Eperjési u. 4/A, H-2509 Es-  
ztergom-Kertváros (HU). TÁRKÁNYI, Gábor [HU/HU];  
Patkó u. 15, H-2040 Budaörs (HU).

(74) Common Representative: **RICHTER GEDEON VEG-**  
**YÉSZETI GYÁR RT.**; Gyömrői út 19-21, H-1103 Bu-  
dapest (HU).

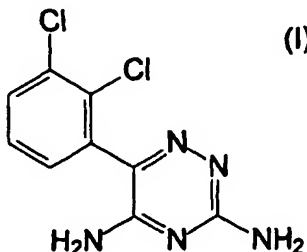
#### Published:

— with international search report

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: NEW PROCESS FOR THE SYNTHESIS OF HIGH PURITY 3,5-DIAMINO-6-(2, 3-DICHLOROPHENYL)-1,2,4-  
TRIAZINE



(57) Abstract: The present invention relates to a new process for the synthesis of high purity 3,5-diamino-6-(2,3-dichlorophenyl)-1,2,4-triazine of formula (I) using 2,3-dichlorobenzoyl cyanide and an aminoguanidine salt as starting materials. 2,3-dichlorobenzoyl cyanide is reacted with 1-2 mol equivalent of aminoguanidine salt in 3-6 mol equivalent of methanesulfonic acid, then the obtained adduct of formula (IV) is transformed without isolation into the product with magnesium oxide. In given case the obtained crude product can be recrystallized from a proper organic solvent.